

IN THE CLAIMS

A complete listing of the claims follows and replaces any prior versions.

1 1. (Currently Amended) A data structure disposed before a page in a document
2 data stream for referencing and identifying resource objects, the data structure comprising a
3 resource environment group disposed before a page group, the resource environment group
4 referencing and identifying resource objects for at least the page group, the resource
5 environment group providing an indication of resource objects to be made available prior to
6 attempting to print the page.

1 2. (Canceled)

1 3. (Original) The data structure of claim 2 wherein all of the resource objects
2 of the document are made available prior to attempting to print the first page.

1 4. (Original) The data structure of claim 1 further comprising a mapping
2 structure for identifying images, PostScript page objects, PDF page objects, PostScript
3 resource objects or PDF resource objects.

1 5. (Original) The data structure of claim 4 further comprising a mapping
2 structure for identifying overlay resource objects.

1 6. (Original) The data structure of claim 1 further comprising a mapping
2 structure for identifying overlay resource objects.

1 7. (Original) The data structure of claim 1 further comprising at least one of
2 a map data resource field for identifying images, PostScript page objects, PDF page objects,
3 PostScript resource objects or PDF resource objects and a map page overlay structure for
4 identifying overlays, wherein the order of the map data resource structure and the map page
5 overlay structure is flexible.

1 8. (Currently Amended) A data stream defining a print document, the data
2 stream comprising at least one data structure disposed before a page in the document data
3 stream for referencing and identifying resource objects, the data structure comprising a
4 resource environment group disposed before a page group, the resource environment group
5 referencing and identifying resource objects for at least the page group, the resource
6 environment group providing an indication of resource objects to be made available prior to
7 attempting to print the page.

1 9. (Canceled) The data stream of claim 8, wherein the data structure is
2 disposed at a beginning of a document before a first page to provide an indication of all
3 resource objects that will be needed to print the document

1 10. (Original) The data stream of claim 9 wherein all of the resource objects
2 of the document are made available prior to attempting to print the first page.

1 11. (Original) The data stream of claim 8 further comprising a mapping
2 structure for identifying images, PostScript page objects, PDF page objects, PostScript
3 resource objects or PDF resource objects.

1 12. (Original) The data stream of claim 11 further comprising a mapping
2 structure for identifying overlays.

1 13. (Original) The data stream of claim 8 further comprising a mapping
2 structure for identifying overlays.

1 14. (Original) The data stream of claim 8 further comprising at least one of a
2 map data resource structure for identifying images, PostScript page objects, PDF page
3 objects, PostScript resource objects or PDF resource objects and a map page overlay structure
4 for identifying overlays, wherein the order of the map data resource structure and the map
5 page overlay structure is flexible.

1 15. (Original) A method of printing, comprising:
2 receiving a print request for printing a document;
3 generating a presentation data stream defining the document, the presentation data
4 stream including at least one page group, the page group defining at least one page for
5 printing; and
6 placing a resource environment group before a page group, the resource environment
7 group referencing and identifying resource objects for at least the page group, the resource
8 environment group providing an indication of resource objects to be made available prior to
9 attempting to print the at least one page group.

1 16. (Original) The method of claim 15 wherein the page group comprises
2 structures for defining a single page.

1 17. (Original) The method of claim 15 wherein the page group comprises
2 structures for defining a plurality of pages.

1 18. (Original) The method of claim 15 wherein the resource environment
2 group references and identifies resource objects for all page groups in the document.

1 19. (Original) The method of claim 15 wherein the placing comprises placing
2 an Nth resource environment group before an Nth page group.

1 20. (Original) The method of claim 15 further comprising reading the
2 resource environment group and ensuring all resource objects identified by the resource
3 environment group are available to the printer before printing pages associated with the
4 resource environment group.

1 21. (Original) The method of claim 20 wherein the ensuring comprises
2 downloading any resources identified by the resource environment group that are not resident
3 at the printer.

1 22. (Currently Amended) A method of printing, comprising:
2 receiving a print data stream comprising a resource environment group disposed
3 before a page group, the resource environment group referencing and identifying resource
4 objects for at least the page group, the resource environment group providing an indication of
5 resource objects to be made available prior to attempting to print the page;
6 determining whether the print data stream includes a resource environment group;
7 downloading resource objects identified by the resource environment group when the
8 print data stream includes a resource environment group; and
9 printing the pages defined by the print data stream.

1 23. (Original) The method of claim 22 wherein the determining further
2 comprises determining whether the print data stream includes an Nth resource environment
3 group associated with an Nth page group and the downloading further comprises
4 downloading resource objects for the Nth page group identified by the Nth resource
5 environment group when the print data stream includes an Nth resource environment group
6 associated with an Nth page group.

1 24. (Original) A system for printing, comprising:

2 a document generator for generating a presentation data stream defining the

3 document, the presentation data stream including at least one page group, the page group

4 defining at least one page for printing and including a resource environment group before a

5 page group, the resource environment group referencing and identifying resource objects for

6 at least the page group, the resource environment group providing an indication of resource

7 objects to be made available prior to attempting to print the at least one page group;

8 a print server, coupled to the document generator, the print server determining

9 whether the print data stream includes a resource environment group and downloading

10 resource objects identified by the resource environment group when the print data stream

11 includes a resource environment group; and

12 a control unit, coupled to the print server, for printing the document using the

13 resource objects downloaded by the print server.

1 25. (Original) The print system of claim 24 wherein the print server

2 determines whether the print data stream includes an Nth resource environment group

3 associated with an Nth page group and downloads resource objects for the Nth page group

4 identified by the Nth resource environment group when the print data stream includes an Nth

5 resource environment group associated with an Nth page group.

1 26. (Original) An article of manufacture comprising a program storage
2 medium readable by a computer, the medium tangibly embodying one or more programs of
3 instructions executable by the computer to perform a method for printing, the method
4 comprising:

5 receiving a print request for printing a document;
6 generating a presentation data stream defining the document, the presentation data
7 stream including at least one page group, the page group defining at least one page for
8 printing; and
9 placing a resource environment group before a page group, the resource environment
10 group referencing and identifying resource objects for at least the page group, the resource
11 environment group providing an indication of resource objects to be made available prior to
12 attempting to print the at least one page group.

1 27. (Original) An article of manufacture comprising a program storage
2 medium readable by a computer, the medium tangibly embodying one or more programs of
3 instructions executable by the computer to perform a method for printing, the method
4 comprising:
5 receiving a print data stream;
6 determining whether the print data stream includes a resource environment group; and
7 downloading resource objects identified by the resource environment group when the
8 print data stream includes a resource environment group;
9 printing the pages defined by the print data stream.